RI STATE FORENSIC SCIENCES

LABORATORY
"Science in the Service of Justice"

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Date Printed: 07/06/2011	Released: Rev. Num:	02/16/2011 2.0
Approved By: Robin Smith	·	

## **FTIR**

### 1. Purpose and Scope

The FTIR is a confirmatory method used to obtain the IR spectrum of a chemical compound.

### 2. Definitions

**FTIR** 

Fourier transform infrared spectroscopy

## 3. Safety Instructions

No safety instructions are identified for this instruction.

#### 4. Instructions

### 1. Instrument set-up

To start, click on spectrum icon

- 1. To obtain background spectrum
- click on instrument tab then scan tab.
- click on file folder icon then ATR icon
- click on scan tab
- under scan type, click: background, apply, scan
- after scan is complete, click on overwrite tab then delete background scan using edit tab
- 2. To obtain polystyrene spectrum
- click on instrument tab, scan tab, beam tab
- click on filter icon
- select polystyrene and click: OK, apply, scan
- after scan is complete click on overwrite tab
- click view tab, then label peaks tab
- print polystyrene spectrum by clicking on printer icon
- then delete polystyrene spectrum using the edit tab
- click on instrument tab, scan tab, beam tab

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## **FTIR**

- click on filter icon and select "none"
- click: OK, apply
- 3. To obtain sample spectrum
- place enough sample to cover ATR crystal and clamp down (use liquid well for liquid samples)
- enter sample case number and click scan tab
- after scan is complete, click on overwrite tab
- print sample spectrum by clicking on printer icon
- to perform library search, click on IR icon
- when finished exit out of program and clean off the ATR crystal with methanol.

#### 2. Maintenance

The FTIR receives a yearly maintenance and calibration check from a certified Perkin Elmer field engineer. This is documented in the logbook adjacent to the instrument workstation.

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**INTERPRETATIONS:** 

**LIMITATIONS:** 

**MISCELLANEOUS:** 

## 6. FC-Instruments/Equipment/Materials

Spectrophotometer FTIR

# 7. FC-Chemicals/Reagents

No fc-chemicals/reagents are identified for this instruction.

#### 8. Records

**Drug Chemistry Checklist** 

FORM-FC-01

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## **FTIR**

# 9. Policy References

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Equipment	5.5
Sampling	5.7
Handling of test and calibration items	5.8
Assuring the quality of test and calibration results	5.9
Reporting the results	5.10

### 10. Procedure References

No procedures are referenced by this instruction.

### 11. Instruction References

No instructions are referenced by this instruction.

### 12. Other Reference Documents

There are no other reference documents for this instruction.

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